BRUHAT BANGALORE MAHANAGARA PALIKE

YELHANKA ZONE ELECTRICAL DIVISION

Detailed Estimate for Providing LED Street Lights as a Pilot Project in ward no 09

Budget Head .....P.3142.....

AEE/EE/42/EST/05/16-17

Division No..... Estimate No. ..... For Rs. **2500000.00**

Sl.No.	SR Page & SL No	Description of Work	Qty.	Rate Rs.	Unit	Amount
1	33/5.2.1	Supply and erection of .....Mtr RCC Pole including earth work etc,. complete as per the standard technical specification of BESCOM 8Mtr 145Kg WL	10	6047.00	Nos	60470.00
2	26/4.35.3	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & FixtureEfficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part III.LED Streetlight 65watts	75	18720.00	Nos	1404000.00
3	108/17.12	Supplying and Fixing of.....mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires. Using 32mm dia G.I.pipe	125	893.00	Each	111625.00

4	12/2.12.1	Wiring for lighting/power circuit using one of PVC insulated 1100v grade stranded **Aluminium** unsheathed wire single core/multi core cable in open or consealed system of wiring. a)4 sqmm.	250	7.50	Each	1875.00
5	56/7.6.1	Supplying of 1.1kv grade Aerial Bunched cable stranded & compacted Aluminium Phase conductor and Stranded Messenger conductor with all aluminium alloy, Phase conductor is insulated with XLPE compound insulated Messenger with specified IS - 14255:1995 & confirming to GTP of group A. 2 X 16 + 1 X 25 SQ.MM	225	92.00	Per Mtr	20700.00
6	Bes SR	Stringing of 1.1kv LT Arial Bunched Cable, BESCOM SR	225	10.30	Per Mtr	2317.50
7	6.42.2 50	Supply and Installation / Fixing / Provision of Outdoor type Thermoplastic Modular Panel enclosure with transparent Polycarbonate Lid, shock proof, IP65 (Weather Proof), rust proof, dust proof, water proof, corrosion proof having internally Embedded gasket on both lid and flap suitable to fix Single Phase / Three Phase Energy Meter in suitable base plate and having a provision for Fuse / MCB cutout with suitable transparent hinged flap opening for operating MCB along with complete tamper proof SEALING facility.300mmx450mmx214mm	30	5826.00	Nos	174780.00
8	47/6.16.6	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.f)40-63 Amps SP, Group A	30	677.00	Each	20310.00
9	46/6.12.4	Supply and fixing of 4-pole power contactor with NO/NC contacts on existing wood / panel board using necessary bolts, nuts, washers and wiring etc., complete. d) 100-125 Amps	31	9915.00	Each	307365.00
10	6/2.6.7	Wiring for lighting/power circuit using one of PVC insulated 1100v grade, multis and **Copper** conductor single core cable in open or consealed system of wiring.I Group A Materials.g)16 sqmm	35	132.00	Per Mtr	4620.00
11	17/3.10	Supplying and fixing hylum brand hand plastic sheet 3mm thick with necessary niches for fixing switches, regulators etc., and fixing on exisiting wood or metal box using N.E screws	35000	0.22	Sqcm	7700.00

	2/1.1.2	Open Conduit Systeme: Supplying heavy gauge PVC conditpipe,,,,,,,,,, dia confirming to IS 2509 with suitable size bends,junction boxes, adhesibve paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall stone structure or rawl plug incase of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using NF screws. c)25mm dia 2mm thick	150	70.00	Mtrs	10500.00
13	/6.40.1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. And M.S. flat… with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. A)40x40x6mm.	35	263.00	Mtrs	9205.00
14	10 AR	Micro processor based electronic timer consisting of Display Unit(LCD), built in Real Time Clock (RTC) and keypad with option to operate relay/contactor in programmable mode (pre-defined ON/OFF time) or astronomical mode (based on sunset and sunrise depending on the latitude and longitude of the location of installation of Switch) or based on Intensity of natural light (lux level using IR sensor), built in software to select the mode of operation by the user	31	7214	Nos	223634.00
15	34/5.11	Supplying and stringing of ACSR Conductor (6/2.59mm Al +1/2.59mm Steel).	2000.00	30.00	Mtrs	60000.00
16	34/5.9.1	Supplying and Fixing …..including all Hardware's etc. complete as per the standard technical specification of BESCOM 1.1 KV Pin Insulator	50.00	44.00	Nos	2200.00
17	34/5.9.5	No. 8 Strain Insulator	25.00	14.00	Nos	350.00
18	5.4.2 P-33	Supply and fixing of …….cross arm including all Hardware's complete as per the standard technical specification of BESCOM. 2 Pin 45x45x5mm -510mm	80.00	306.00	Nos	24480.00
19	55/7.4.4	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 4 core 16 sqmm	200	140.40	Mtrs	28080.00

20	7 61/7.8.1	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. 6 sqmm to 16 sqmm	200	10.80	Mtrs	2160.00
21	8 61/7.9.1	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7)In soil (ordinary)	175	78.00	Mtrs	13650.00
22	11 49/6.4.2	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete.16SWG	25000	0.33	Sqcm	8250.00
23	6/2.6.1	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper conductor single core wire in open or concealed system of wiring as per IS-694:1990 & confirming to GTP of GROUP -B.1 sqmm.	150.00	10.75	Mtrs	1612.50
24		Mislenious				116.00
		Total				**2500000.00**

CERTIFICATE

1. The Place was inspected and work is essential
2. The Provision made in the estimate is adequate and are necessary.
3. The Work comes in the BBMP limit and is legitimate charges on the Corporation Funds.
4. The rates in the Estimate is based on PWD (Elec) SR of 2014-15 .

T.N. Baddy

Jr/Asst. Engineer (Elec)

Asst. Exe.Engineer (Elec)
yelhanka zone
Bruhat Bangalore Mahanagara Palike

Administrative Sanction for Rs. 25.00 lakhs
Twenty Five Lakhs
is accorded under P.3142 EED
Pilot Project
Registered as EE No. EE/Elec/42/AS/05/16-2 Subject to conditions contained in enclosed memo Dt 20.02.17 No. P.No. 50 and 51 / S/No 05/16-17

EXECUTIVE ENGINEER (ELEC)
YELHANKA ZONE
BRUHAT BANGALORE MAHANAGARA PALIKE

Executive Engineer

Technical Sanction
Accorded For 25.00 lakh Rs.
Head of A/C P3142
CER NO : 166 Dt: 08/03/17

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